

WHAT IS CLAIMED IS:

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1. A serial compressed bus interface, comprising:
a serial-to-parallel converter having a single serial
5 data input line adapted to receive time-division multiplexed
serial data from a plurality of data sources; and
enable logic adapted to input at least one data valid
signal that identifies each of a plurality of data consumers
for which the time-division multiplexed serial data is
10 valid.
2. The serial compressed bus interface according to
claim 1, wherein said serial-to-parallel converter is
further adapted to convert the time-division multiplexed
15 serial data to parallel data, and to output the parallel
data to the plurality of data consumers.
3. The serial compressed bus interface according to
claim 1, further comprising a request control circuit
20 adapted to output at least one request signal that requests
the time-division multiplexed serial data for at least one
of the plurality of data consumers.
- 25 4. The serial compressed bus interface according to
claim 3, further comprising at least one encoder adapted to
encode at least one of the at least one data valid signal

and the at least one request signal to correspond to more than one of the plurality of data consumers.

5 5. The serial compressed bus interface according to claim 3, wherein the request control circuit is further adapted to encode the at least one request signal to correspond to more than one of the plurality of data consumers.

10 6. A method for transmitting serial compressed data from a plurality of data sources to a plurality of data consumers, comprising the steps of:
 time-division multiplexing the serial compressed data from the plurality of data sources to generate time-division
15 multiplexed serial compressed data; and
 transmitting the time-division multiplexed serial compressed data to the plurality of data consumers.

20 7. The method according to claim 6, wherein said transmitting step transmits the time-division multiplexed serial compressed data on a single data line.

25 8. The method according to claim 6, further comprising the step of encoding a data valid signal to indicate that the time-division multiplexed serial compressed data is valid for more than one of the plurality of data consumers.

9. The method according to claim 6, further comprising the step of encoding a request signal to indicate that the time-division multiplexed serial compressed data is requested by more than one of the plurality of data consumers.

10. A method for transmitting serial compressed data from a plurality of data sources to a plurality of data consumers, comprising the steps of:
interleaving serial compressed packet data from the plurality of data sources to generate time-division multiplexed serial compressed data; and
transmitting the time-division multiplexed serial compressed data to the plurality of data consumers.